

G. FOCHT.
 BOTTOM DUMP BUCKET.
 APPLICATION FILED NOV. 21, 1908.

952,894.

Patented Mar. 22, 1910.

2 SHEETS—SHEET 1.

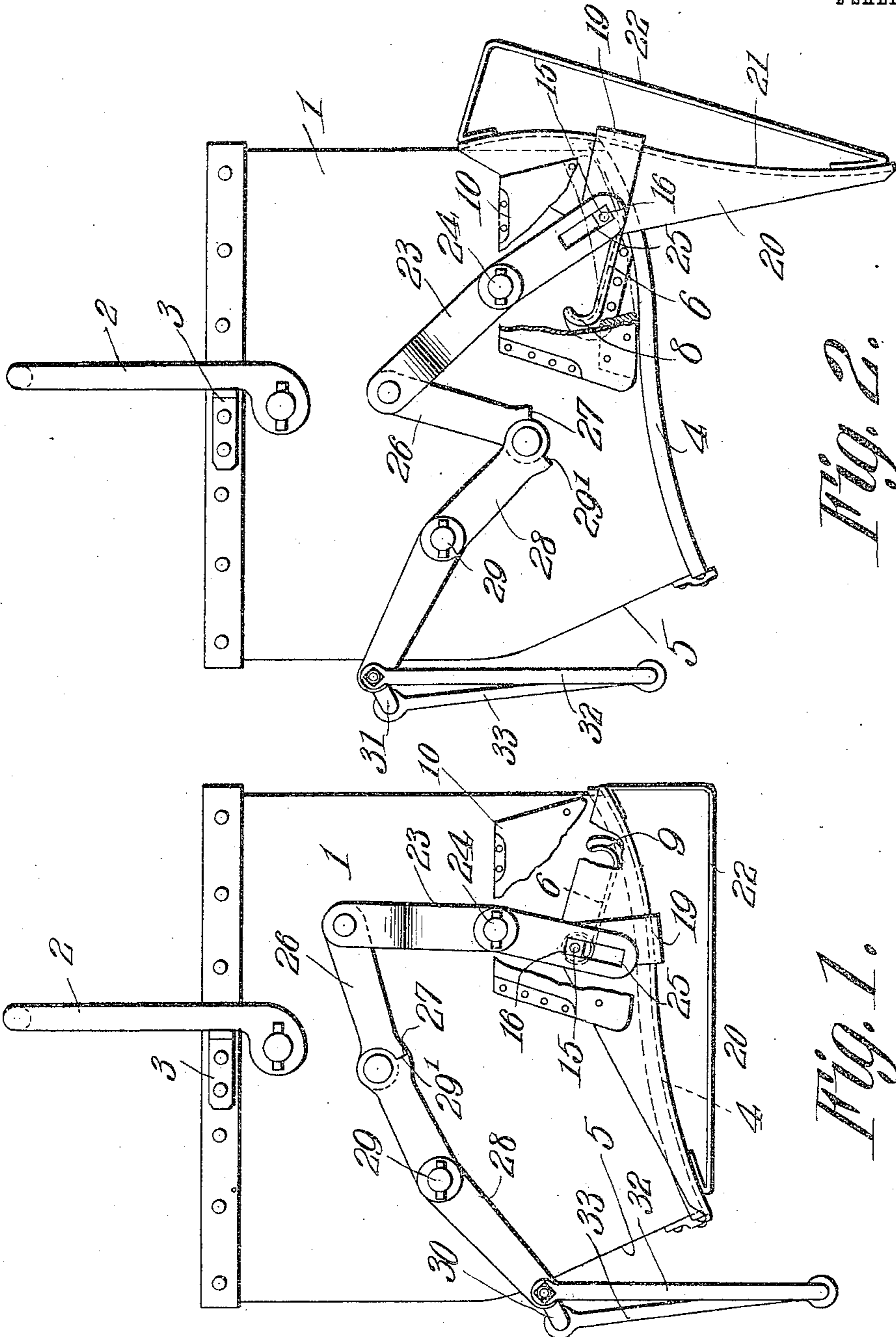


Fig. 2.

Fig. 1.

Witnesses,

E. J. Howard
E. Van der

George Focht. Inventor,

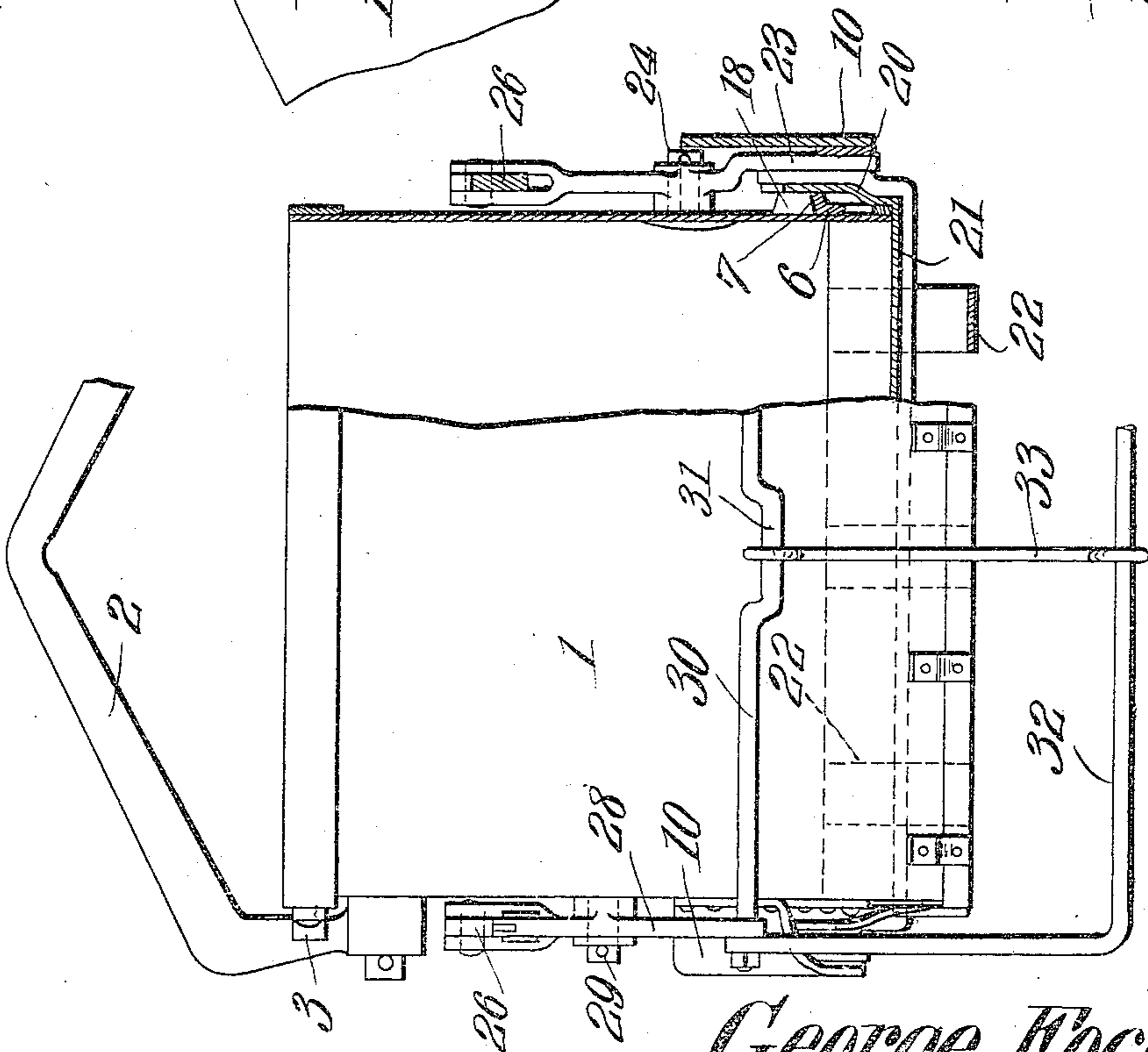
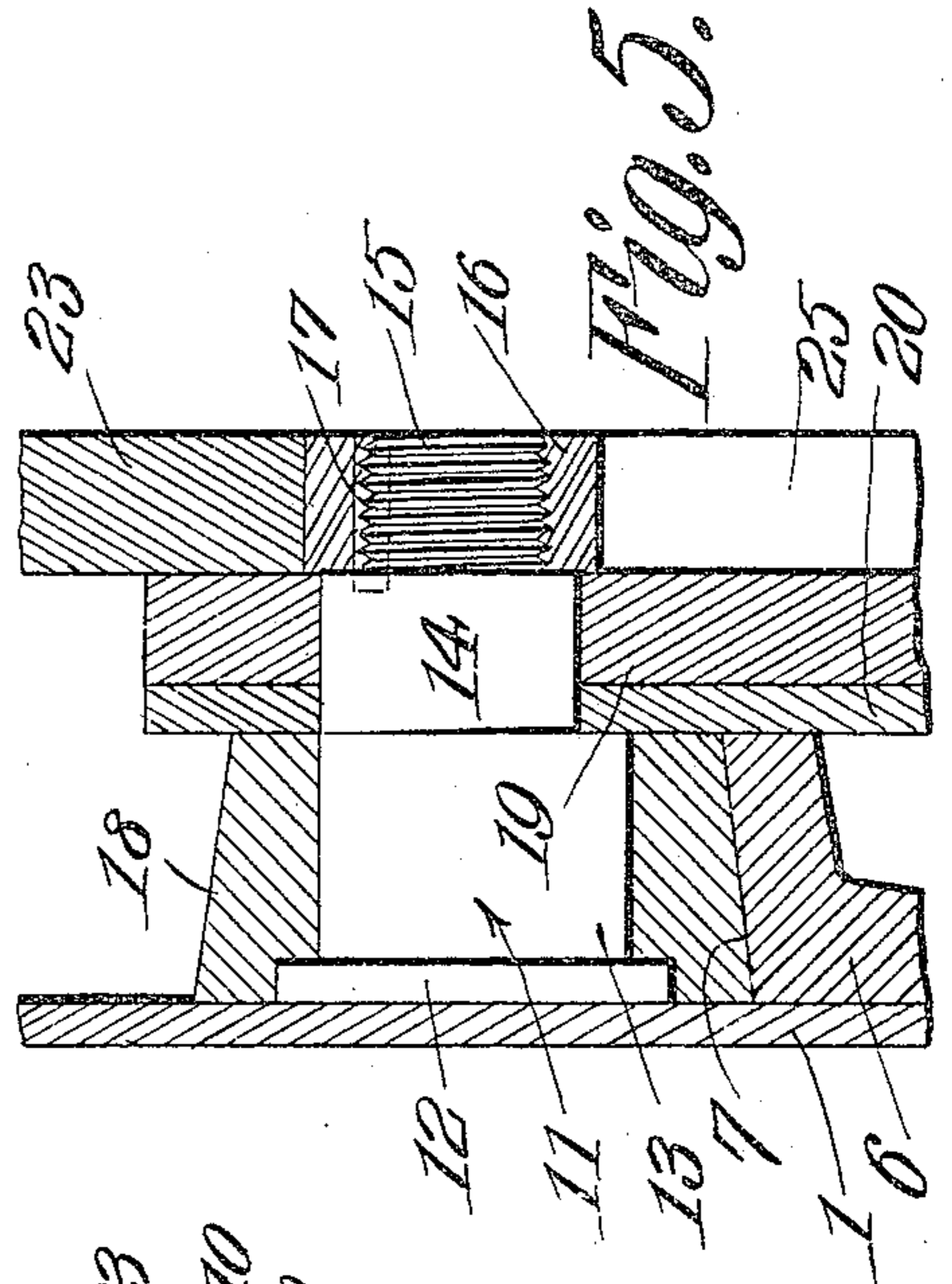
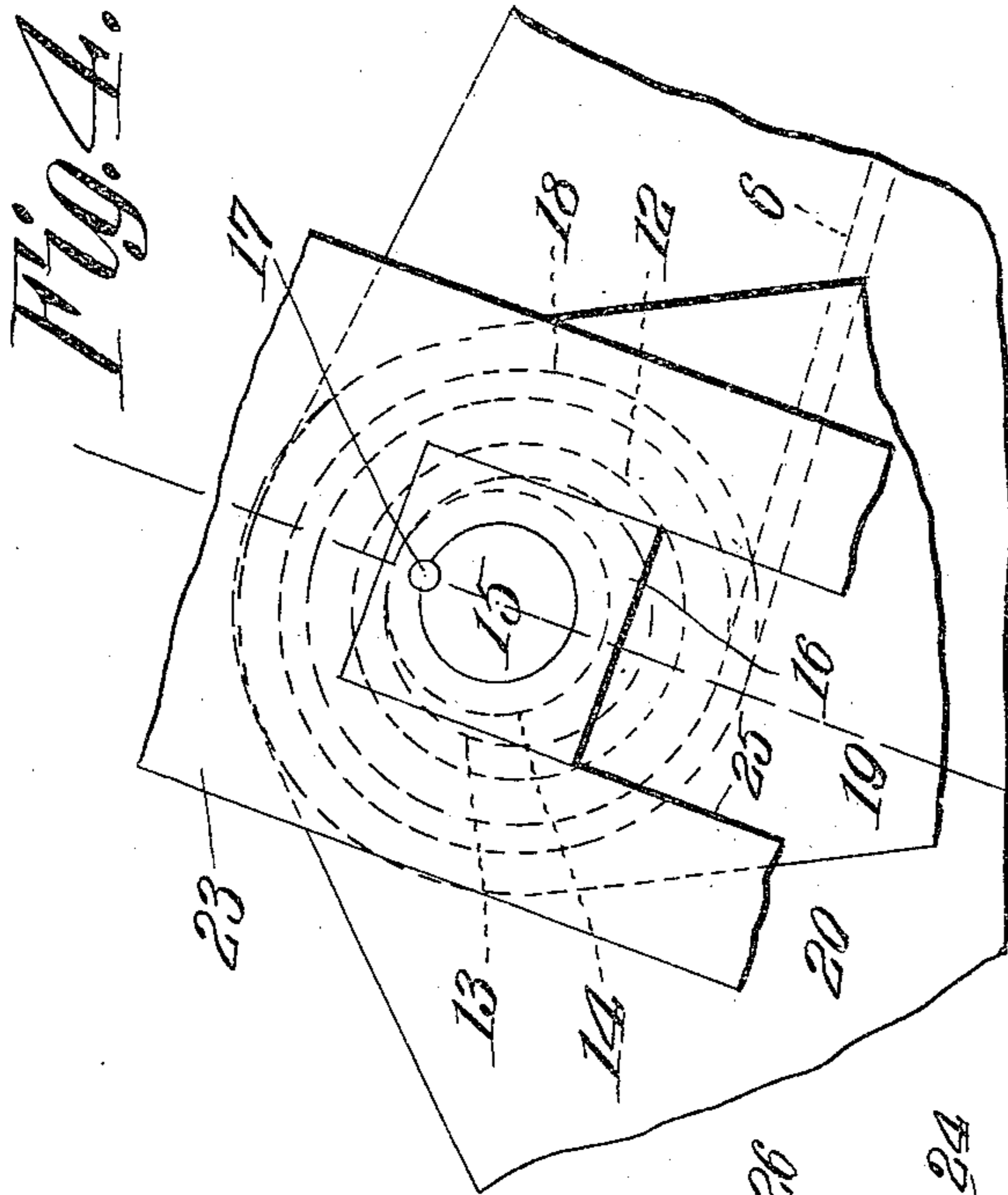
By *C. A. Snow & Co.* Attorneys.

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Witnesses,
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UNITED STATES PATENT OFFICE.

GEORGE FOCHT, OF HOBOKEN, NEW JERSEY.

BOTTOM-DUMP BUCKET.

952,894.

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Application filed November 21, 1908. Serial No. 463,817.

To all whom it may concern:

Be it known that I, GEORGE FOCHT, a citizen of the United States, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented a new and useful Bottom-Dump Bucket, of which the following is a specification.

This invention has relation to bottom dump buckets, and it consists in the novel construction and arrangement of its parts, as hereinafter shown and described.

The object of the invention is to provide a bucket as indicated wherein the bottom may move laterally with relation to the body and tilt during the act of dumping, and have reverse movement during the act of closing, means being provided for drawing the bottom tightly against the lower edge of the bucket at the final closing movement, whereby a water-tight structure is effected.

With the above object in view the invention embodies tracks or guide-ways mounted at the sides of the bucket, and along which pins of peculiar configuration are adapted to travel. Lever mechanisms are mounted at the sides of the bucket and are operatively connected with the said pins and are adapted to move the same along the said tracks; the said lever constructions being of such arrangement that they constitute locks when in such positions as will hereinafter appear. The bucket bottom is pivotally connected with said pins, and may describe the movement indicated as said pins pass along the said tracks.

In the accompanying drawings:—Figure 1 is a side elevation of the bucket, showing the bottom closed. Fig. 2 is a side elevation of the bucket, showing the bottom open. Fig. 3 is a front elevation of the bucket, with parts shown in section. Fig. 4 is an enlarged detail end view of one of the pins which connects the bucket bottom with the body thereof. Fig. 5 is a transverse sectional view of adjacent parts, and showing one of the said pins in side elevation.

The bucket consists of the body 1, to the upper portion of which is attached the pivoted bail 2, the swinging movement of which is adapted to be limited by means of the stops 3 which are mounted at the upper edge portion of the said body 1. The lower side edges of the said body 1 are ogee shaped

as at 4, while the lower forward portion 5 of the front side of the said body 1 is inclined toward a median line through the said body, whereby a constricted opening is formed at the lower portion of the body 1.

The tracks or guides 6 are mounted upon the sides of the body 1, and are preferably inclined downwardly toward the rear side of the body 1, but the said tracks may be otherwise disposed, if desired.

The treads 7 of the tracks 6 incline downwardly toward the sides of the body 1 to which the said tracks are attached. Fig. 5 of the drawings shows the inclination of the treads of the said tracks, as at 7. The forward ends of the tracks 6 merge into the upwardly curved extremities 8, while the rear ends of the tracks merge into the upwardly curved extremities 9. The said tracks 6 are preferably mounted upon the plates 10, which, in turn, are riveted or otherwise secured to the sides of the body 1.

The pins 11 are of peculiar configuration, and are provided, at their inner ends, with laterally disposed flanges 12, which are concentrically arranged with relation to the eccentric portions 13. The portions 13 merge into the concentric portions 14, which, in turn, merge into the reduced, externally screw-threaded portion 15. The square nuts 16 are mounted upon the portions 15 and are held against rotation with relation thereto by means of the locking pins 17, which are transversely disposed with relation to the said nuts, and occupy registering grooves provided in the said nuts and the portions 15 of the said pins 11. The frusto-conical rollers 18 are journaled for rotation upon the eccentric portions 13 of the said pins 11, and are adapted to travel upon the inclined treads 7 of the tracks 6. The flanges 12 are countersunk in the inner faces of the rollers 18. The concentric portions 14 of the pins 11 are journaled for rotation in the end portions of the stirrup 19. The said stirrup 19 passes under the bottom 20 of the bucket, and its end portions lie against the side of the said bottom 20. The floor 21 of the bottom 20 is of ogee configuration, to conform with that configuration at 4 at the lower edges of the sides of the body 1. The angle-irons 22 are attached at their ends to the front and rear portions of the bottom 20, and are adapted to serve as supports for the

bucket as an entirety when the said bottom is closed against the lower edges of the body 1.

The levers 23 are fulcrumed upon the pins 24, which, in turn, are attached to the sides of the body 1, and the lower ends of the said levers 23 are provided with elongated slots 25, which snugly receive the nuts 16, carried by the threaded ends of the pins 11. The links 26 are pivotally connected with the upper ends of the levers 23, and, at their opposite ends, are provided with shoulders 27. The levers 28 are fulcrumed upon the pins 29, which, in turn, are mounted upon the sides of the body 1, and the working ends of the levers 28 are pivotally connected with the links 26 and are provided with the shoulders 29', which, at times, are adapted to abut against the shoulders 27 of the said links 26. The power ends of the levers 28 project in front of the forward side of the body 1, and are connected together by a cross-rod 30. Said rod, at an intermediate point, is provided with a laterally disposed portion 31, which may serve as a handle-grip, and the U-shaped rod 32 is connected at its ends to the ends of the said rod 30.

The brace rod 33 is connected at its upper end with the laterally disposed portion 31 of the rod 30, and at its lower end to the intermediate portion of the rod 32.

The operation of the bucket is as follows:—When the bottom 20 is closed against the body 1, the parts are in the positions as indicated in Fig. 1 of the drawings, in which it will be seen that the power ends of the levers 28 are swung down, and that the working ends thereof are elevated, and that the shoulders 29' and 27 of the levers 28 and links 26 abut against each other, and that the pivotal connection between the levers 28 and links 26 is located above a line connecting the centers of the pins 29 and the points of pivotal connection between the links 26 and the levers 23. Thus the said links and levers are held in locked position. It will also be seen that the power ends of the levers 23 are swung rearwardly with relation to the body 1, and that the working ends thereof are disposed toward the middle of the body 1. Thus the pins 11 are held toward the upwardly curved portions 8 of the tracks 6, and the bottom 20 is held firmly against the lower edges of the body 1. When it is desired to swing the bottom 20 with relation to the body 1, the power ends of the levers 28 are elevated, as indicated in Fig. 2, whereby the working ends of the said levers are swung down, carrying with them the attached ends of the links 26. Thus, the power ends of the levers 23 are swung toward the middle of the body 1, and the working ends of the last said

levers are swung away from the middle of the said body. As the working ends of the levers 23 pass along the tracks 6, the stirrup 19 is carried toward the ends of the said tracks upon which are mounted the extremities 9, and, by reason of the fact that the forward portion of the bottom 10 is of greater weight than the rear portion thereof, the said bottom will tilt into the approximately vertical position, as indicated in Fig. 2. At the same time, the rear portion of the bottom or floor 21, of the bottom 20 will scrape against the rear edge of the body 1, and thus the said rear portion of the floor 20 is relieved of material. When the bottom 20 is to be closed against the lower edges of the body 1, the operation above described is reversed; and, it will be seen that, as the pins 11 move toward the extremities 8 of the tracks 6, the said pins will turn axially with relation to the said tracks, but are held against rotation or turning movement with relation to the levers 23; thus, as the bottom 20 arrives at the final stage of its closing movement, the pins 12 are turned with relation to the tracks 6, whereby the eccentric portions 13 of the said pins are swung below the axes of the pins (as indicated in Fig. 4 of the drawings), and the bottom 20 is drawn up and held tightly against the lower edges of the body 1. By this arrangement, it will be seen that a bottom dump bucket is provided which effects a water-tight structure when the bottom is closed against the body.

Having described my invention, what I claim as new, and desire to secure, by Letters Patent, is:—

1. A bucket comprising a body, a track attached to the body, a carrying member arranged to move along the track and having an eccentric portion, a roller mounted upon said eccentric portion and engaging the tread of the track, a bottom attached to the carrying member and means for moving the carrying member along the track.

2. A bucket comprising a body, a track attached to the body, a carrying member arranged to move along the track and having an eccentric portion, a roller journaled upon the eccentric portion of the carrying member and engaging the tread of the track, a bottom attached to the carrying member and means for moving the carrying member along the track and turning the same axially.

3. A bucket comprising a body, a track attached to the body, a carrying member mounted for movement along the track, a bottom attached to the carrying member, a lever fulcrumed to the body and having sliding engagement with the said carrying member.

4. A bucket comprising a body, a track attached to the body, a carrying member

arranged to move along the track, a bottom
attached to the carrying member, a lever
fulcrumed to the body and slidably engag-
ing the carrying member, a second lever ful-
5 crumed to the body, and a link pivotally
connecting the said levers together.

In testimony that I claim the foregoing

as my own, I have hereto affixed my signa-
ture in the presence of two witnesses.

GEORGE FOCHT.

Witnesses:

WALTER J. NEUBAUER,
CHARLES DIETHER.